

## Inputs

### Controller Mode

#### Controller Mode

Controller mode allows you to use the CAT interface on your device to control an output. You can enter controller mode by clicking on Controller.

#### How to use an Input

Using controller mode has two different type of control either digital(ON/OFF) or Analog (Variable slider)

Depending on which pin you use as an output you will get one or the other.

You may notice that some pins have a ~ next to them. They are the pins that you can control with a slider. The pins without a ~ are digital and will only function as ON/OFF buttons.

Servos require you use an analog pin!

#### Tips and Tricks

1. Label your pins, it makes it easier for others to use your project
2. If you are not using your servo for a while, unplug it
3. play around with building different linkages for servos.
4. Once you have mastered controller mode, try using a sensor input instead!

## WIFI:

## Outputs

### SERVO MOTOR



Black--> GND  
Red--> PWR  
Yellow--> PIN 9

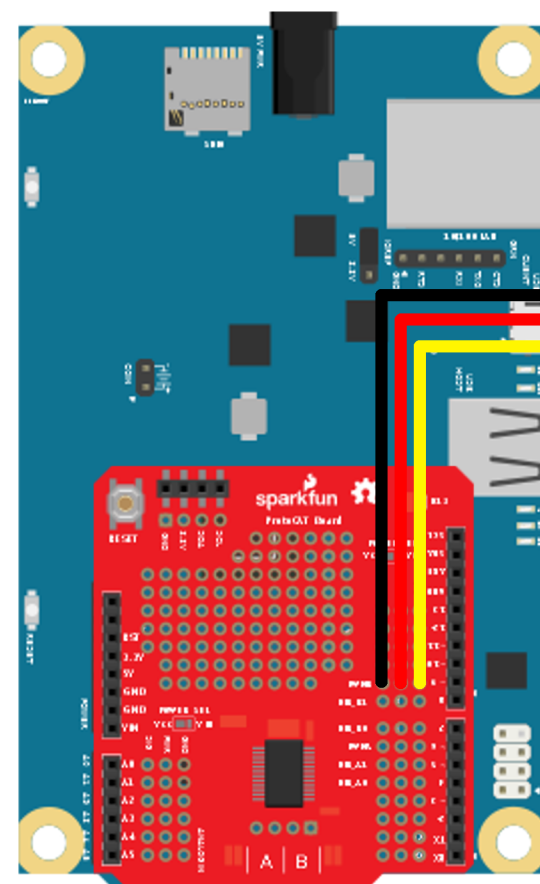
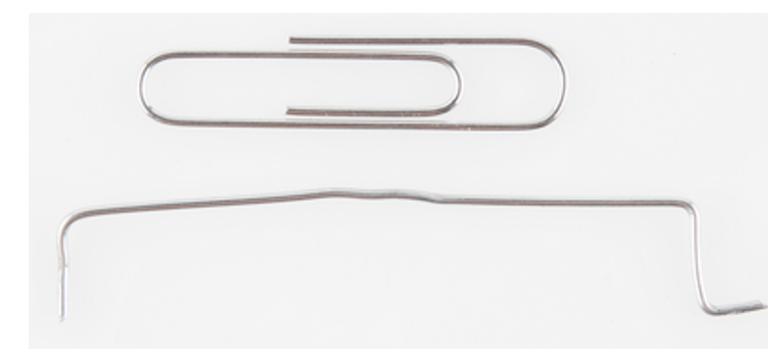
A Servo is a special type of motor. Instead of just rotating, you can tell it a specific angle to rotate to and stop.

#### Project: Balance Beam

Using CAT in controller mode and a servo motor build a system to control a balance beam.

The balance beam should move freely with the servo and should be able to hold a marble on the beam. The goal is give someone enough control over the beams so that they can keep the marble from rolling off of one end.

#### Bending a paper clip linkage:



1. Connect to the wireless network above
2. go to cat.com
3. Add an input and name it
4. Add an output and name it
5. Connect your input to your output
6. Build a nightlight using your system!